The Weather Vane

The Newsletter of the Heartland Network Inventory and Monitoring Program

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News in Brief

Plant Monitoring / Geostatistical Analysis
Jennifer Haack, SCEP employee, continues work on a spatial analysis protocol for monitoring data as part of her graduate studies at Missouri State University. Jen uses plant community data from TAPR as a test case.

Invasive Plants
See feature article by Craig Young

T&E Plants
Two reports released in December 2005: "Glade-wide Missouri Bladderpod Monitoring at Bloody Hill Glade, Wilson's Creek National Battlefield, 1997-2005" and "Summary Report: Western Prairie Fringed Orchid Monitoring at Pipestone National Monument, 1993-2005".

White-tailed Deer Monitoring
Staff implemented the second year of monitoring at ARPO, PERI and TAPR using sampling methods revised from last year's experience. A detailed protocol will result from the work.

Grassland Birds
The network added several parks to those being monitored. The short breeding season for birds makes adding parks difficult. Scheduling on a rotational basis might solve the logistics problems.

Fish Community Monitoring
Fall 2005 marked completion of fish sampling and aquatic habitat monitoring in prairie parks and the start of pilot fish sampling at big river parks. Aquatic habitat monitoring in conjunction with invertebrate sampling is currently underway.

Aquatic Invertebrates
Staff collected aquatic invertebrate pilot data from November 2005 through January 2006 at BUFF and OZAR. Sample processing and invertebrate identification began in January. Staff will complete a draft sampling protocol in late spring and submit it for peer-review.

Crisis Management and Invasive Species

Invasive plants continue to establish and spread throughout our National Parks. Resource managers and scientists spend considerable time focusing on them and questioning whether management actions are effective. Are we doing enough to prevent new invasions? Are we wasting time and energy on a problem for which no solutions exist?

Claims of crisis surround us: "budget crisis", "environmental crisis", "health crisis". Conservation biologists describe their discipline as a crisis-driven science. Are invasive plants really a problem, much less a crisis?

We hear a litany of invasive plant problems: competition with native plants, alteration of cultural landscape, disruption of ecosystem processes and wildlife habitat. Global transportation facilitates rapid movement of plants across natural dispersal barriers. Invasive plant impacts on native populations and the cost of control are undeniable and make these plants a real problem.

Perhaps the greatest frustration is that managers cannot completely control plant invasions. Nor have ecologists developed risk assessments to predict circumstances that result in a specific plant spreading.

More information will not solve the invasive plant problem, but scientists cannot develop any solutions without information. Monitoring can often identify changes in abundance and distribution of existing and new invasions. This information assists parks in assessing the problem and formulating management strategies.

Under the HTLN monitoring plan, the network will monitor invasive plants on twelve parks over a five year cycle. This will provide parks with effective monitoring within the constraints of the program.


Garlic mustard

Combining park monitoring efforts with network data provides added value. The HTLN and Pipestone National Monument will integrate network data with park-collected invasive plant control data. This cooperative approach should permit park managers to assess the efficacy of management actions—a monitoring objective normally outside the scope of I&M monitoring. Such cooperation is a small step forward in a holistic approach to confronting the invasive plant crisis.

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Great Birding at HOCU

Birders near Chillicothe, Ohio have found a great place to watch rare species. A network inventory and park surveys of bird species at Hopewell Culture National Historical Park (HOCU) have verified 172 species within the park. They include federally threatened bald eagle, ten Ohio State Endangered or Threatened species, eight Ohio State Species of Concern, and 14 Ohio State Species of Interest. These species include grassland obligates.

Many grassland bird species have shown dramatic decline in abundance because of habitat loss throughout Ohio and the Midwest. Managing landscapes for grassland birds has become one of HOCU's top priorities. The park converts its agricultural land to fallow fields with the intention of eventually restoring fields to native grasses. The presence of so many listed species utilizing park property adds to the importance of this management activity.

Publicizing survey information contributed to increased public interest in the park's birds. In May 2005, HOCU held the first annual Bird Festival at Mound City Group. The public joined knowledgeable birders on guided walks, watched falconry and bird banding demonstrations, and participated in bird-related activities.

The park had focused much of its bird activity on the Mound City Group, but now HOCU volunteer birders survey other units as well. Two units (Mound City Group, High Bank Works) have been designated Important Bird Areas (IBA); however the other park units might have unique qualities that qualify them for designation as IBA also. The IBA program, recognized by many conservation organizations as a global effort, identifies sites that provide essential habitat for birds.

Information from bird surveys has contributed to management decisions and interpretive programs at HOCU. It might contribute to recognition of additional units as IBA sites. Birds of all types have been observed utilizing the various habitats located on park land. Grassland birds such as white-throated sparrows, dickcissels, Henslow's sparrows, and eastern meadowlarks are just a few of the important species taking advantage of the well managed landscape at Hopewell Culture National Historical Park.

A red-tail hawk gets its bearings from the Mound City Group map.

For more information on Heartland Network's grassland birds:
http://www.nature.nps.gov/im/units/htln/pdf/Reports/Grassland%20Bird%20Inventory.pdf

For information on IBA:
http://www.audubon.org/bird/iba/index.html

http://www.birdlife.org/action/science/sites/

Joining Our Staff

Kevin James will join the HTLN staff as a plant ecologist, taking the position vacated by Alicia Sasseen. Kevin earned an MA in Botany from the University of Kansas. He has over six years of professional experience with the Center for Plant Conservation at the Missouri Botanical Garden and the USDA Forest Service, Wenatchee Forestry Sciences Laboratory. Kevin currently serves as a botanist with the Wenatchee Forestry Sciences Laboratory, a division of the Forest Service's Pacific Northwest Research Station. Kevin will join us in late March.

Note on Invasive Species information:

NPS has web information on invasive and exotic species. Learn about the 17 Exotic Plant Management Teams located across the nation at http://nature.nps.gov/biology/invasivespecies/.

Need a children's book? Download http://www.nature.nps.gov/biology/invasivespecies/invasive_weeds_book.pdf

The Midwestern Invasive Plant Network is quickly becoming the leader in coordinating invasive plant management across the Midwestern United States. Visit www.mipn.org.

More on the Web

Updated HTLN Education and Information website:
http://www.nature.nps.gov/im/units/htln/education/education.htm

HTLN Reports:
http://www.nature.nps.gov/im/units/htln/monitoring/reports/reports.htm

Need to search the literature?
http://www.science.gov/
http://www.npwrc.usgs.gov/pubs/pubs.htm

Design and analysis tools:
http://bio.research.ucsc.edu/people/doaklab/natconserv/